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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,677	06/29/2001	Makoto Tomioka	010680	9414

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EXAMINER	
CZEKAJ, DAVID J	
ART UNIT	PAPER NUMBER
2483	

NOTIFICATION DATE	DELIVERY MODE
01/24/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

Office Action Summary	Application No.	Applicant(s)	
	09/893,677	TOMIOKA ET AL.	
	Examiner	Art Unit	
	DAVID CZEKAJ	2483	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 November 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 7-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/30/10 has been entered.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1, 3-5, and 7-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi (US 5,902,232) in view of Takahashi et al. (US 5,588,948) in further view of Nishigaki et al. (4905082), (hereinafter referred to as "Nishigaki").

As for Claim's 1 and 17, Igarashi (US 5,902,232) teaches a non-flexible endoscope for front-end insertion and a camera head that includes an objective optical system, a relay optical system, an imaging optical system and a solid-state image

pickup device. Igarashi (US 5,902,232) also teaches the front-end insertion section with a camera head being able to be detached and replaceable in the region on the relay optical system (Igarashi: Column 8, lines 13-67; see also Figures 3 and 12). Igarashi further teaches the relayed image is in the camera head and a field mask is disposed at or near the position of the relayed image (Igarashi: column 23, lines 38-49, wherein the field mask is the visual field mask, the camera head is the optical system). Igarashi also teaches that the relayed image is formed between the relay optical system and the imaging optical system (Igarashi: figure 2 and column 10, lines 10-12).

Igarashi (US 5,902,232) fails to specifically teach where the camera head includes a part of the relay optical system and the relay optical system is constructed to be moved along the optical axis in a focusing operation, but Takahashi et al and Nishigaki. do (Takahashi: Figure 1). Takahashi further discloses the front end insertion section includes the objective optical system, a remaining part of the relay system, and the imaging optical system (Takahashi: figures 1-2). Nishigaki teaches that in prior art endoscope systems, small diameters are difficult to achieve (Nishigaki: column 1, lines 49-57). To help alleviate this problem, Nishigaki discloses the relay optical system is constructed to be moved along the optical axis in a focusing operation (Nishigaki: column 5, line 65 – column 6, line 18). Since the relay optical system can be put together in many different methods including the method used in Igarashi (US 5,902,232), it would have been obvious to one of ordinary skill to, as long as the method included a camera head and relay optical lens system, include the relay optical system with the camera head in any order or method to use the same relay optical system and

be able to remove a front-end insertion section. One would be further motivated since the resulting apparatus would result in a smaller diameter scope.

As for Claim's 10 and 11, Igarashi (US 5,902,232) teaches a non-flexible endoscope with a camera head including a visual field mask that is constructed to be moved in a focusing operation within part of the relay optical system. Igarashi (US 5,902,232) also teaches that this field mask can be placed in either the rear lens component or the front lens component. If at the front lens component it would be able to be placed at the front focal point of the front lens component (Igarashi: Column 16, lines 28-33 and 60-63; Column 23, lines 38-49).

As for Claim's 9 and 14, Igarashi (US 5,902,232) teaches an optical system consisting of a single negative lens and a single positive lens. Igarashi (US 5,902,232) also teaches adding an additional negative or positive power to the lens. He also teaches that it would be alright to use a cemented lens component for the intended correction as well (Igarashi: Column 43, lines 22-33).

As for Claim 15, Igarashi (US 5,902,232) teaches an effective diameter of the lens element to be 7.4 mm which shows that the outer diameter of the front-end insertion section must be at least 6 mm (Igarashi: Column 48, Embodiment 24, line 52).

As for Claim 18, Igarashi (US 5,902,232) teaches the rays nearly being in parallel with one another between the front-end insertion section and the image pickup device (Igarashi: Column 18, lines 20-27).

As for Claim's 3-5, 7, 8, 12, 13 and 16, many of the limitations are stated in the above rejections. Although Igarashi (US 5,902,232) fails to teach the position of the

view field mask and the imaging senor being moved vertically with respect to the optical axis to allow focusing on the center of the image, Takahashi et al. does (Takahashi: Column 2, lines 42-55; Column 5, lines 46-55). Takahashi shows both the view field mask and the imaging sensor moving along the vertical axis. He also shows that they can rotate with respect to the camera head. Since it is well known that moving the view field mask or imaging sensor along the vertical axis will re-center the image according to where the view field mask or imaging sensor is on the respective vertical axis it would have been obvious to one of ordinary skill to center the image by moving the view field mask or imaging sensor vertically.

2. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi (US 5,902,232) in view of Takahashi et al. (US 5,588,948) in further view of Nishigaki et al. (4905082), (hereinafter referred to as "Nishigaki") in further view of Igarashi (US 5,954,634).

Igarashi (US 5,902,232) teaches the movements of a visual field mask and the imaging optical system for a focusing operation, but he fails to teach the movements of the imaging sensor. Although Igarashi (US 5,902,232) and Takahashi et al. (US 5,588,948) fail to teach this, Igarashi (US 5,954,634) does (Igarashi: Column 4, lines 57-67). Since the difference between integrating the imaging sensor with the movements of the visual field mask and the optical system could just be the difference of focusing or magnification it would have been obvious to one of ordinary skill that the separate or integrated imaging sensor would achieve the same results.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID CZEKAJ whose telephone number is (571)272-7327. The examiner can normally be reached on Mon-Thurs and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Ustaris can be reached on (571) 272-7383. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dave Czekaj/
Primary Examiner, Art Unit 2483